

2006 Field Plantings in Southern Arizona



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Tucson PMC

2006 Activities

Four field plantings were conducted between July and August 2006 in Southern Arizona using the Truax II Seed Drill. The primary purpose of these field plantings was to assess the germination of Tucson PMC plant materials developed for southern Arizona in a variety of southern Arizona locations.

The first planting took place on the Vaca Ranch in the San Raphael Valley of Santa Cruz County. The Tucson NRCS Field Office assisted with this planting. This site was selected because sections of the ranch, which is dominated by exotic Lehmann lovegrass, had burned that summer. We were curious to see if planting native species, using seed harvested from a local site, could tip the scale toward native species germination after fire. A variety of species were planted, including *Eragrostis intermedia*, *Bouteloua gracilis*, *B. hirsuta*, *B. eriopoda*, *B. curtipendula*, *B. chondrosioides*, *Bothriochloa barbinodis*, *Digitaria californica*, *Lycurus phleoides*, *Leptochloa dubia*, *Aristida spp.*, *Sida filicaulis*, *Ipomoea coccinea*, *Viguiera annua*, *convolvulus equitans*. The seed mix was from a native harvest from a nearby ranch.



Field Planting on Vaca Ranch after fire.

The second planting took place on Flying W Ranch near Winkelman, AZ in Pima County. Again, the Tucson Field Office assisted with this planting. The site chosen for planting has been used for years for NRCS plantings. Vegetation was removed prior to planting and the 3 to 5 acre plot is fenced to protect it from grazing. Four TPMC releases were tested in plots at this site at two rates, the standard rangeland rate of approximately 20 seed/ac (the rate the drill was set) and a doubled rate, where the drill was passed through the plot twice. 'Loetta' Arizona Cottontop (*Digitaria californica*), Pima germplasm Pima pappusgrass (*Pappophorum vaginatum*), 'Stevan' Plains bristlegrass (*Setaria leucopila*) and Cochise germplasm Spike dropseed (*Sporobolus contractus*). The 8 plots were marked with GPS and observed that fall. A visual observations immediately following the summer rains determined that Arizona cottontop at the double rate had good germination.



Field Planting on the Flying W Ranch

The third planting took place on a ranch near Bonita, AZ in Cochise County. The Wilcox Field Office assisted with this planting. The planting site was a wide open and unvegetated site located within view of a well-traveled road, and not to be grazed for an extended period of time. Sufficient space allowed for 550 ft by 24 ft plots. Five TPMC releases were tested. The same four releases listed above were planted at both rates, as well as approximately 5 lb of 'Salado' Cane beardgrass. This increased rate was used for Cane beardgrass because the seed was too fluffy to pass through the drill at the standard rangeland rate. Approximately 3 ac were planted in total, about 0.3 ac/treatment for the 10 treatments.



Field planting near Bonita

A fourth planting took place on a ranch near Hot Well Dunes near Safford, a site on reclaimed farmland beside the Gila River. The Safford Field Office assisted with this planting. The previous year swales had been worked into the site to retain water, however no vegetation had established on the site. Ten plots of the same treatments as the Bonita planting were placed between the swales and plot locations were recorded with GPS.



Field Planting on the near Safford

Approximately 3 ac total were planted, between 0.2 and 0.4 ac of each of the 10 treatments. Follow-up visual observations determined that no germination took place in any of the plots. The rapid movement of water between the swales or soil salinity may be preventing seedling establishment.